

Apró közlemény / Short communication

Escaping of *Euphorbia myrsinites* from cultivation in Eger (E Hungary)

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Az *Euphorbia myrsinites* elvadulása Egerben

Összefoglalás: Az *Euphorbia myrsinites* L. (Euphorbiaceae) közismert dísznövényünk. A Földközi-tenger medencéjében, a Fekete-tenger körül, a Kaukázusban és Kis-Ázsiában őshonos. Elvadulásának számos esete ismert Nyugat- és Közép-Európából, illetve Észak-Amerikából. Magyarországon mintegy fél évszázada ismertek alkalmi kivadulásai. Újabban az ország több pontjáról jelezték a jelenlétét. Jelen közleményben a faj kivadulásának újabb esetét mutatom be, Egerből. A rendelkezésre álló adatok alapján az *E. myrsinites*-t Magyarországon lokálisan meghonosodottnak tekinthető, de a formális kritériumok alapján lokálisan inváziós képessége is lehet. A faj pontos magyarországi státuszának megállapításához további megfigyelések szükségesek.

Kulcsszavak: adventív, hajtásos növény, invázió, Magyarország, meghonosodás

Abstract: *Euphorbia myrsinites* L. (Euphorbiaceae) is a well-known ornamental plant with native distribution around the Mediterranean Basin, the Black Sea, the Caucasus region and Minor Asia. Its escape from cultivation and its naturalization in Western and Central Europe as well as in North America was reported in many cases. In Hungary, the casual escape of *E. myrsinites* has been documented more than fifty years ago and new observations were recently reported from different regions of the country. Here, I discuss a new record of the species from the town of Eger (E Hungary). The obtained data allow considering *E. myrsinites* as a locally naturalized species in the flora of Hungary. According to standardized criteria, the species may be able for local invasions too, but further observations are needed to accurately determine its present status in Hungary.

Keywords: alien species, flora, Hungary, invasion, naturalization

Euphorbia myrsinites L. (Euphorbiaceae) is a well-known ornamental plant mostly cultivated in expositions of rock gardens (KIRÁLY 2009, PAHLEVANI *et al.* 2011). Its native range partially covers the Mediterranean Basin, the Black Sea, the Caucasus region and Minor Asia, where the species was noted from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, France (Corsica), Georgia, Greece, Iran, Italy, Montenegro, North Macedonia, Romania, Russia (the Western Caucasus), Serbia, Slovenia, Spain (Balears), Turkey as well as Ukraine (Crimea) (RADELIFFE-SMITH & TUTIN 1968, RADELIFFE-SMITH 1982, MOSYAKIN & FEDORONCHUK 1999, ASSYOV & PETROVA 2006, EURO+MED 2006 [1], PAHLEVANI *et al.* 2011, SÁRBU *et al.* 2013, PRAPROTNİK 2016). Habitats of the species are rocky places, calcareous slopes, mountain pastures and steppes, scrub oak communities and open grounds near forests (MOTRONYUK 2009,



PAHLEVANI *et al.* 2011). Its escape from cultivation and its naturalization was reported e.g. from Austria (MELZER & BARTA 1994), Belgium (VERLOOVE 2013 [2]), the Czech Republic (PLADIAS 2014 [3]), Germany (BRENNENSTUHL 2012) and some other European countries (The National Data and Information Center on the Swiss Flora 2004 [4], FISCHER *et al.* 2008), where *E. myrsinites* has mostly been noted as a casual alien species. It is also a widely distributed alien plant in the USA (The Invasive Plant Atlas of the US 2018 [5]). It is categorized as a noxious weed species in Colorado (Colorado. Department of Agriculture 2019 [6]) and Oregon (Oregon Administrative Rules Database 2020 [7]) which implies a need for the effective control and statewide eradication of the species and a ban of its cultivation.

In Hungary, the first report of *E. myrsinites* escaping cultivation was published by SOÓ (1966) ("*Rarely escaping, e.g. Budapest, Tihany*"). Recently, BALOGH *et al.* (2004) included the species in the list of neophytes as a casual alien. Ability of *E. myrsinites* for escaping in Hungary was also mentioned by KIRÁLY (2009), however, the report did not contain any specified information. Distribution map of the species was not published in the *Atlas Florae Hungariae* (BARTHA *et al.* 2015). Nevertheless, a few records of the species have recently been published for the towns Letenye and Siklós-Máriagyűd (Zala and Baranya counties; CSIKY *et al.* 2018) and for the village of Üröm (Pest county; RIGÓ 2019), where spontaneous and subsponaneous occurrence of *E. myrsinites* individuals were documented in paving stone cracks and in a rocky grassland. At the present, the information about these findings are partly represented in the online version of *Atlas Florae Hungariae* [8].

Although in Eger, *E. myrsinites* is planted in the Botanical Garden, on the campus of Eszterházy Károly University, and in some private gardens in the town, it does not seem to be a really popular and widely planted ornamental plant (personal observation). On the campus of Eszterházy Károly University, around flower beds with planted individuals, several escaping plants of *E. myrsinites* has been documented during the last two years:

- About 10 individuals in asphalt cracks along a path to the university's meteorological site, 0.5–3 m from a small artificial slope fortified by concrete flower beds (constructed in 2007), in which *E. myrsinites* was planted about ten years ago (April 18, 2018; N47.90382° E20.38802°; CEU: 8088.3; EGR).
- A few individuals near a fortified slope along the upper part of Leányka Street, in front of Invest Apartment Hotel (April 18, 2018; N47.90422° E20.38707°; CEU: 8088.3). The number of subsponaneous plants in these two sites somewhat increased in 2019.
- Two individuals along a rainwater drainage channel (May 2020; N47.90327° E20.38705°; CEU: 8088.3). These plants grow about 100 m from the first location and 110 m from the second one.

The local dispersal of *E. myrsinites* is presumably connected to the mowing of these areas by string trimmers which scatter the seeds within a few meters. Rainwater also can sweep away the seeds – the last-mentioned plants in the channel most probably emerged from seeds like this. It is worth to note that urban birds, especially feral pigeons, actively eat the ripe fruits of *E. myrsinites*, thus ornithochory potentially also can support the dispersal of this plant.

Using the terminology of RICHARDSON *et al.* (2000), *E. myrsinites* may be considered as a locally naturalized species in Hungary. Although the speed of its dispersal observed in Eger (about 100 m from planted individuals in about 10 years) is remarkable, its spread only affects a narrow area, the number of offspring is quite low and we have no information on the permanency of the population over the life cycle of individuals. Thus, more cases and observations are needed to consider the current invasive status of *E. myrsinites* in Hungary. In this situation, it is important both to control and to continue the observation on its dispersal, and to develop relevant recommendations for their prevention.

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